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DERWENT-WEEK: 197902

TITLE: Metal guide foil for paper in rotary printing machines - using shot blasted non-ferrous metal foil electroplated with nickel

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BASIC-ABSTRACT:

The foil is fixed on the periphery of printing rollers, and consists of a carrier foil (a) with a smooth surface (a1) and a surface (a2) with uniformly distributed indentations. Surface (a2) is covered with a layer (b) of Ni corresp. with the indentations.

The Ni layer (b) pref. consists of a thick layer (b1) of soft Ni next to surface (a2), followed by a thin outer layer (b2) of hard Ni. Foil (a) is pref. a nonferrous metal, e.g. Cu or Al; and the tolerance on the height of the edges of the indentations is pref. max. 10-20 mu m. Surface (a2) is pref.

blasted with metal shot to form the indentations, and then electroplated with
Ni(b1, b2).

The foil prevents the fresh printing from being smeared and the surface (b2) is
wear-resistant so the foil has long working life avoiding the loss of time
involved if a foil has to be replaced.

TITLE-TERMS: METAL GUIDE FOIL PAPER ROTATING PRINT MACHINE SHOT BLAST NON
FERROUS METAL FOIL ELECTROPLATING NICKEL

DERWENT-CLASS: G05 P74

CPI-CODES: G05-F;

Description OF DE2820549

Metallic elbow guidance foil The invention concerns a metallic elbow guidance foil for the attachment on the extent surface vonDruckrnaschinenzylindern, whose surface is provided with evenly distributed unevenness, and a procedure for the production the same. Elbow guidance foils are well-known in different versions. They serve on the surface by pneumatic cylinders or elbow transfer cylinders by printing machines, in particular rotary printing presses, to be fastened in order to avoid with it during the contact of this surface with the freshprinted on side lubricating the color. The surface of such elbow guidance foils is provided for this with unevenness, in particular with collections, by which the basic surface is substantially made smaller. In addition, the elbow guidance foils should be verschleissfest at their basic portions, so that the replacement and thus a stop of the machine can be if possible avoided. The collections on the surface of the elbow guidance foils should be evenly distributed on the surface, so that favorable results are reached. It is a carrier form occupied with a rubber layer admits (US-PS 2.804.417), with that spherical bodies, for example small glass balls, is embedded, which stand out partial from the rubber layer. Here the actual carrier of the pressure volume can consist of several layers, in order to achieve a sufficient stability of the product. Besides the rubber layer is relatively hard and is for this vulcanized.

The production of this elbow guidance foil is relatively complicated. A surface with relatively verschleissfesten collections is reached, however the

carrier is too little rigid, so that it can with certain applications giving way. Besides it is not to be avoided that particulars of the collections embedded in the rubber layer separate and fall out in the enterprise. It is a far elbow guidance foil admits (DT-OS 24 46 188), which consists of a compact metallic layer, as both the carrier and the collections are made of the same material. In it the carrier exhibits a sufficient firmness, and also the collections are sufficiently verschleissfest, however is also here the manufacture expenditure considerably, on the one hand because of the use of a solid nickel layer and on the other hand because of the necessary treatment of the back of the elbow guidance foil, in order to receive a smooth edition.

The invention is thus the basis the task to train an elbow guidance foil of the initially described kind in such a way that both the nickel need and the working on expenditure can be reduced, without reducing however thereby the firmness of the carrier and the unevenness. This task is solved in accordance with the invention by the fact that the elbow guidance foil exhibits at least two layers, whose first layer exhibits a transparency with on side a smooth and a surface provided on the other side with recesses, and whose second layer is the other side covering nickel layer, whose surface the recesses of the other side of the transparency exhibits appropriate recesses. It is reached that with the printed elbow in contact coming surface the favorable characteristics of a nickel layer exhibits that however a treatment of the transparency is not necessary. The invention covers also a procedure for the production of the elbow guidance foil according to invention, with which the transparency of a one-sided jet

treatment with a metallic blast grain is subjected and the jet-treated surface is nickel plated galvanically.

The invention is represented and is described in the following in the enclosed design for example. Show: Fig. 1 a cut by a part of a Bogenführungs foil in accordance with the invention, Fig. 2 an opinion of the work side of the Bogenführungs foil after Fig. 1 and Fig. 3 a cross section by the elbow guidance foil after Fig. 1 in increased representation. In Fig. 1 represented elbow guidance foil exhibits a transparency 1, which consists appropriately of a non-ferrous metal. This exhibits first on both sides a smooth surface and on a side of a jet treatment with a metallic blast grain is subjected. As blast grains steel balls are preferably suitable. The one surface of the transparency 1 is distorted by this jet treatment; develop here recesses 2, whose depth and diameter are to be kept as even as possible. It is substantial that the recesses are distributed evenly over the surface and here only one deformation of the surface, not however the other side of the transparency 1, do not arise. For this purpose it is favourable to subject the transparency 1 during the jet treatment of a tensile stress.

From the jet treatment on the one hand recesses result, on the other hand one the edges of the recesses are deformed, so that them over the original, smooth surface to rise up to be able. Substantial it is now that the difference is small in the height of the edges of the individual recesses. This can be achieved by a suitable attitude of the blast grain jet. Here can by suitable choice of the blast grain speed, which radiance and the jet medium the desired even

distribution of the recesses 2 at the surface of the transparency 1 are reached, whereby the elevator tolerance 3 of the edges 4 of the recesses 2 at the most 10 - 20/u amounts to.

After completion the transparency 1 is brought to the jet treatment on one side into a galvanic bath and covered on the blast grain-treated surface with a nickel layer 5. The nickel layer 5 can be divided if necessary into two layers, a first layer 6 made of soft nickel and a further layer 7 made of hard nickel, which is lying on the blast grain-treated surface, on this layer. The layer thickness of the soft nickel layer 6 can be substantially larger here than that the hard nickel layer 7. In this way one receives a practically not-lubricating and verschleissfeste elbow guidance foil. ----------

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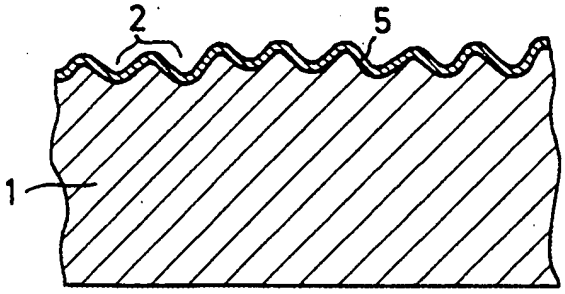

FIG. 1

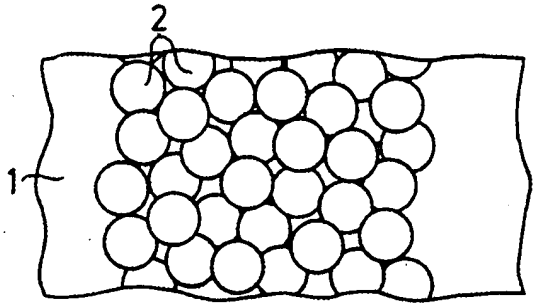

FIG. 2

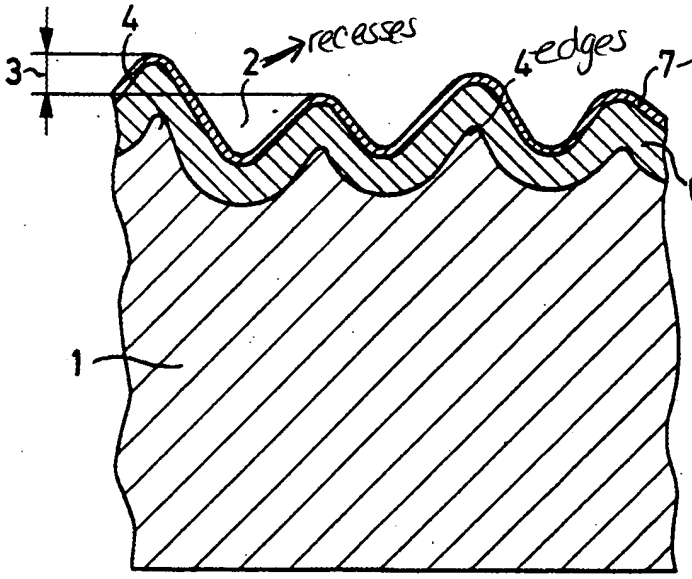

FIG. 3

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